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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/748,188	12/27/2000	Tadayoshi Iijima	P107424-00019	2973

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WASHINGTON, DC 20036

EXAMINER
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UHLIR, NIKOLAS J

ART UNIT	PAPER NUMBER
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1773

DATE MAILED: 10/06/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/748,188

Applicant(s)

IIJIMA, TADAYOSHI

Examiner

Nikolas J. Uhler

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 14 July 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 2-8 is/are pending in the application.
- 4a) Of the above claim(s) 3-7 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 2-3, 8 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413) Paper No(s) \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

***Claim Rejections - 35 USC § 103***

1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 8 and 2-3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yukinobu et al. (US5411792).

2. This rejection is maintained as set forth in the prior office action (paper #17).

***Response to Arguments***

3. Applicant's arguments, see paper #19, filed 7/30/03, with respect to the prior applied 35 U.S.C 112 2nd paragraph rejections have been fully considered and are persuasive. The rejections of claims 8 and 1-2 under 35 U.S.C 112 2nd paragraph has been withdrawn.

4. Applicant's arguments filed 7/30/03 with respect to the prior applied 35 U.S.C 103(a) rejections have been fully considered but they are not persuasive. In the instant case, the crux of the applicant's argument is directed towards the calcining step taught by Yukinobu. The applicant argues that the calcining step of Yukinobu carbonizes the binder, resulting in soot, which is subsequently removed by heating in air. The applicant further argues that even if there was some residue left on the film after calcinations, the residue no longer functions as a binder resin. The applicant argues that the examiner acknowledges in the action that Yukinobu does not teach the required amount of binder resin, and states that the examiner took official notice when he stated that some amount of residual binder would remain after calcining, and requested the examiner to provide

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an affidavit testifying to the elements taken in official notice or in the alternative to provide another non-final office action withdrawing official notice and provide suitable references for the newly asserted rejection.

5. The examiner hereby cites Belgian Patent application# BE09700962 (published 06/1999) as evidence supporting the element taken in official notice, more specifically that residual polymer remains after calcination unless specific steps (i.e. extremely long calcinations) are performed to remove the residue. US2002/0091277 is an English equivalent to the Belgian application, and clearly teaches that when calcining a resin material, the duration of the calcining step must be sufficient to remove "most of the organic residue originating from the binder (see section 31). Thus, the examiners assertion that "some" binder will remain after calcinations is a fact that is clearly taught in the prior art, as BE09700962 clearly states that after calcining, the calcined resin layer will have some resin residue left over, unless special steps are taken to ensure this does not occur. This clearly supports the elements taken in official notice.

6. With respect to applicants argument as to the amount of binder present in the resin, the examiners position in the prior office action was that 1) some binder resin would remain after the calcinations step, and 2) it would be obvious to one of ordinary skill in the art to control the amount of binder resin remaining in the film after the calcinations step, in light of the teaching in Yukinobu that the resistance and haziness of the film is impacted by the amount of binder present. Given that some residual amount of binder will likely remain in the film, and given the fact that Yukinobu clearly teaches the advantages of controlling the amount of binder in the film, one of ordinary skill in the

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art would have both had motivation and a reasonable expectation of success in making this modification.

7. Regarding applicant's argument that "even if some residue is still on the film after the above heating process, the residue no longer functions as a binder." This argument is irrelevant, as claim 8 merely requires a compressed layer having functional fine particles and "a resin." No requirement is made as to the function of this resin as a binder. Thus, this argument is moot.

8. Regarding applicant's argument that when the prior office action acknowledged that Yukinobu did not teach the specific amount of resin, in order for the examiner to conclude these values, the examiner must take official notice. The examiner respectfully disagrees. The examiner acknowledges that the prior office action acknowledged that Yukinobu doesn't teach the specific amount of resin. The examiners only conclusion with respect to this element was that the amount of resin was a results effective variable and it would have been obvious to one of ordinary skill in the art at the time the invention was made to control the amount of binder resin in the film of Yukinobu in order to obtain a transparent conductive film that exhibited desired resistance and haze properties, as Yukinobu specifically teaches that the amount of resin impacts these properties. The contention that it would have been obvious to one of ordinary skill in the art to control a results effective variable does not constitute the examiner taking official notice when the prior art clearly recognizes that the element in question is a results effective variable.

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9. Last, the applicant argues that the factual inquiries of Graham v. John Deere Co., 383 U.S. 1, 17, 148 USPQ 459, 467 (1966) were not considered or properly applied by the examiner in formulating the rejection of the claims. In particular, the scope and content of the prior art and the level of one of ordinary skill in the pertinent art were not properly determined and demonstrated and applied to the claimed invention. The applicant opines that "proper consideration of factual inquiries demonstrates the non-obviousness of the claimed invention. Yukinobu et al. '792 does not disclose, teach, or suggest that the resin is approximately 0.03-9.3 parts by volume with respect to 100 parts by volume of the conductive particles."

10. The examiner wholeheartedly agrees that Yukinobu in fact does not teach applicants claimed concentration of binder. However, Yukinobu **does** teach a process for forming a film which is known to result in a residual amount of binder remaining in the film, and also teaches that the amount of binder contained in the film determines the film's resistivity and haze properties, as set forth in the prior office action. Thus, given these facts, one of ordinary skill in the art, looking at the art of Yukinobu alone, would have had motivation with a reasonable expectation of success to control the amount of residual binder remaining in the film to a desired range, for the purpose of obtaining a film having a desired level of haze and resistivity. This argument required the examiner to determine the scope and content of the prior art, as well as the level of one of ordinary skill in the pertinent art. Further, the simple presentation of this argument is a demonstration of these elements to the applicant. The applicants argument appears to be drawn from the conclusion that the examiners argument that some residual binder

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would remain in the film after calcinations was in err, as the applicant has provided no other explanation for what the examiner may have determined improperly. As the applicant's argument with respect to the residual polymer has been addressed above, this argument is unpersuasive.

### ***Conclusion***

11. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension-fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

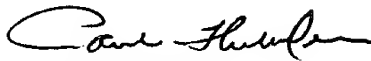
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nikolas J. Uhlir whose telephone number is 703-305-0179. The examiner can normally be reached on Mon-Fri 7:30 am - 5 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paul Thibodeau can be reached on 703-308-2367. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-0389.

MSU  
nju

  
Paul Thibodeau  
Supervisory Patent Examiner  
Technology Center 1700